

# EXHIBIT 20



A starburst graphic with a jagged, sunburst-like border. Inside, the text "OVER 10,000 ENTRIES" is written in a bold, sans-serif font.

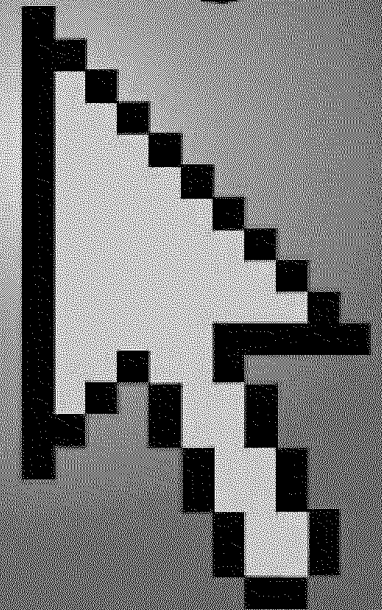
OVER  
10,000  
ENTRIES

Microsoft

# Computer Dictionary

Fifth Edition

- *Fully updated with the latest technologies, terms, and acronyms*
- *Easy to read, expertly illustrated*
- *Definitive coverage of hardware, software, the Internet, and more!*





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click

client-side image maps

C

**click** *vb.* To press and release a mouse button once without moving the mouse. Clicking is usually performed to select or deselect an item or to activate a program or program feature. *See also* right click. *Compare* double-click, drag.

**clickable maps** *n.* *See* image map.

**click rate** *n.* *See* clickthrough rate.

**clicks and mortar** *n.* A business that combines an online presence with traditional “bricks and mortar” outlets.

**click speed** *n.* The maximum interval between the first and second time a user presses a button on a mouse or other pointing device that will still identify these actions as a double-click to the computer as opposed to two single-clicks. *See also* double-click, mouse, pointing device.

**clickstream** *n.* The path a user takes while browsing a Web site. Each distinct selection made on a Web page adds one click to the stream. The further down the clickstream the user goes without finding the sought item, the more likely he or she is to depart to another Web site. Analysis of usage patterns helps Web site designers create user-friendly site structures, links, and search facilities. *See also* Web site.

**clickthrough** *n.* The number of times that visitors to a Web site click on an advertising banner within a specified period of time. Clickthrough is one of the elements that Web site producers use to decide how much to charge advertisers. *See also* clickthrough rate.

**clickthrough rate** *n.* The proportion of visitors to a Web site who click on a banner advertisement there, expressed as a percentage of total visitors to the Web site. *Also called:* click rate. *See also* clickthrough.

**clickwrap agreement** *n.* A contract or license in software or on a Web site that sets forth conditions for use of the software or for goods and services distributed through the Web site. Users must agree to the terms in a clickwrap agreement—typically by clicking on a button that states “I Agree” or “Agree”—before they can install the software or utilize goods or services. A clickwrap agreement is an electronic version of an End-User License Agreement. *Also called:* clickwrap license. *See also* End-User License Agreement. *Compare* shrinkwrap agreement.

**clickwrap license** *n.* *See* clickwrap agreement.

**client** *n.* **1.** In object-oriented programming, a member of a class (group) that uses the services of another class to which it is not related. *See also* inheritance (definition 1).

**2.** A process, such as a program or task, that requests a

service provided by another program—for example, a word processor that calls on a sort routine built into another program. The client process uses the requested service without having to “know” any working details about the other program or the service itself. *Compare* child (definition 1), descendant (definition 2). **3.** On a local area network or the Internet, a computer that accesses shared network resources provided by another computer (called a *server*). *See also* client/server architecture, server.

**client error** *n.* A problem reported by the Hypertext Transfer Protocol (HTTP) client module as the result of difficulty in interpreting a command or the inability to connect properly to a remote host.

**client/server architecture** *n.* An arrangement used on LANs (local area networks) that makes use of distributed intelligence to treat both the server and the individual workstations as intelligent, programmable devices, thus exploiting the full computing power of each. This is done by splitting the processing of an application between two distinct components: a “front-end” client and a “back-end” server. The client component is a complete, stand-alone personal computer (not a “dumb” terminal), and it offers the user its full range of power and features for running applications. The server component can be a personal computer, a minicomputer, or a mainframe that provides the traditional strengths offered by minicomputers and mainframes in a time-sharing environment: data management, information sharing between clients, and sophisticated network administration and security features. The client and server machines work together to accomplish the processing of the application being used. Not only does this increase the processing power available over older architectures but it also uses that power more efficiently. The client portion of the application is typically optimized for user interaction, whereas the server portion provides the centralized, multiuser functionality. *See also* distributed intelligence. *Compare* peer-to-peer network.

**client/server network** *n.* *See* client/server architecture.

**client-side image maps** *n.* An image map that performs the processing completely within the client program (i.e., Web browser) itself. Early Web implementations of image maps (circa 1993) transmitted user mouse click coordinates to the Web server for processing. Generally client-side image maps improve the speed of response to the user. *See also* image map.

work users request files and make changes to them. To deal with the tasks of handling multiple—sometimes simultaneous—requests for files, a file server contains a processor and controlling software as well as a disk drive for storage. On local area networks, a file server is often a computer with a large hard disk that is dedicated only to the task of managing shared files. *Compare* disk server.

**File Server for Macintosh** *n.* An AppleTalk network integration service that allows Macintosh clients and personal computers clients to share files. *Also called:* MacFile. *See also* Print Server for Macintosh, Services for Macintosh.

**file sharing** *n.* The use of computer files on networks, wherein files are stored on a central computer or a server and are requested, reviewed, and modified by more than one individual. When a file is used with different programs or different computers, file sharing can require conversion to a mutually acceptable format. When a single file is shared by many people, access can be regulated through such means as password protection, security clearances, or file locking to prohibit changes to a file by more than one person at a time.

**file size** *n.* The length of a file, typically given in bytes. A computer file stored on disk actually has two file sizes, logical size and physical size. The logical file size corresponds to the file's actual size—the number of bytes it contains. The physical size refers to the amount of storage space allotted to the file on disk. Because space is set aside for a file in blocks of bytes, the last characters in the file might not completely fill the block (allocation unit) reserved for them. When this happens, the physical size is larger than the logical size of the file.

**filespec** *n.* *See* file specification (definition 1).

**file specification** *n.* **1.** The path to a file, from a disk drive through a chain of directory files to the file name that serves to locate a particular file. Abbreviated filespec. **2.** A file name containing wildcard characters that indicate which files among a group of similarly named files are requested. **3.** A document that describes the organization of data within a file.

**file structure** *n.* A description of a file or group of files that are to be treated together for some purpose. Such a description includes file layout and location for each file under consideration.

**file system** *n.* In an operating system, the overall structure in which files are named, stored, and organized. A file system consists of files, directories, or folders, and the information needed to locate and access these items. The term can also refer to the portion of an operating system

that translates requests for file operations from an application program into low-level, sector-oriented tasks that can be understood by the drivers controlling the disk drives. *See also* driver.

**file transfer** *n.* The process of moving or transmitting a file from one location to another, as between two programs or over a network.

**File Transfer Protocol** *n.* *See* FTP<sup>1</sup> (definition 1).

**file type** *n.* A designation of the operational or structural characteristics of a file. A file's type is often identified in the file name, usually in the file name extension. *See also* file format.

**fill<sup>1</sup>** *n.* In computer graphics, the colored or patterned “paint” inside an enclosed figure, such as a circle. The portion of the shape that can be colored or patterned is the fill area. Drawing programs commonly offer tools for creating filled or nonfilled shapes; the user can specify color or pattern.

**fill<sup>2</sup>** *vb.* To add color or a pattern to the enclosed portion of a circle or other shape.

**fill handle** *n.* The small black square in the lower-right corner of a cell selection. When you point to the fill handle, the pointer changes to a black cross.

**film at 11** *n.* A phrase sometimes seen in newsgroups. An allusion to a brief newsbreak on TV that refers to a top news story that will be covered in full on the 11 o'clock news, it is used sarcastically to ridicule a previous article's lack of timeliness or newsworthiness. *See also* newsgroup.

**film recorder** *n.* A device for capturing on 35-mm film the images displayed on a computer screen.

**film ribbon** *n.* *See* carbon ribbon.

**filter** *n.* **1.** A program or set of features within a program that reads its standard or designated input, transforms the input in some desired way, and then writes the output to its standard or designated output destination. A database filter, for example, might flag information of a certain age. **2.** In communications and electronics, hardware or software that selectively passes certain elements of a signal and eliminates or minimizes others. A filter on a communications network, for example, must be designed to transmit a certain frequency but attenuate (dampen) frequencies above it (a lowpass filter), those below it (a highpass filter), or those above and below it (a bandpass filter). **3.** A pattern or mask through which data is passed to weed out specified items. For instance, a filter used in e-mail or in retrieving newsgroup messages can allow users to filter

**F**

**F** out messages from other users. *See also* e-mail filter, mask. **4.** In computer graphics, a special effect or production effect that is applied to bitmapped images; for example, shifting pixels within an image, making elements of the image transparent, or distorting the image. Some filters are built into a graphics program, such as a paint program or an image editor. Others are separate software packages that plug into the graphics program. *See also* bitmapped graphics, image editor, paint program.

**filtering program** *n.* A program that filters information and presents only results that match the qualifications defined in the program.

**FilterKeys** *n.* A Windows 9x accessibility control panel feature that enables users with physical disabilities to use the keyboard. With FilterKeys, the system ignores brief and repeated keystrokes that result from slow or inaccurate finger movements. *See also* accessibility. *Compare* MouseKeys, ShowSounds, SoundSentry, StickyKeys, ToggleKeys.

**Final-Form-Text DCA** *n.* A standard in Document Content Architecture (DCA) for storing documents in ready-to-print form for interchange between dissimilar programs. A related standard is Revisable-Form-Text DCA (RFTDCA). *Acronym:* FFTDCA. *See also* DCA (definition 1). *Compare* Revisable-Form-Text DCA.

**finally** *n.* A keyword used in the Java programming language that executes a block of statements regardless of whether a Java exception, or run-time error, occurred in a previous block defined by the “try” keyword. *See also* block, exception, keyword, try.

**find** *vb.* *See* search<sup>2</sup>.

**Finder** *n.* The standard interface to the Macintosh operating system. The Finder allows the user to view the contents of directories (folders); to move, copy, and delete files; and to launch applications. Items in the system are often represented as icons, and a mouse or similar pointing device is used to manipulate these items. The Finder was the first commercially successful graphical user interface, and it helped launch a wave of interest in icon-based systems. *See also* MultiFinder.

**finger<sup>1</sup>** *n.* An Internet utility, originally limited to UNIX but now available on many other platforms, that enables a user to obtain information on other users who may be at other sites (if those sites permit access by finger). Given an e-mail address, finger returns the user’s full name, an indication of whether or not the user is currently logged

on, and any other information the user has chosen to supply as a profile. Given a first or last name, finger returns the logon names of users whose first or last names match.

**finger<sup>2</sup>** *vb.* To obtain information on a user by means of the finger program.

**fingerprnt<sup>1</sup>** *vb.* To scan a computer system to discover what operating system (OS) the computer is running. By detecting a computer’s OS through fingerprinting, a hacker is better able to specify attacks on system vulnerabilities and therefore better able to plan an attack on that system. A hacker may use several different fingerprinting schemes separately and in tandem to pinpoint the OS of a target computer.

**fingerprnt<sup>2</sup>** *n.* Information embedded or attached to a file or image to uniquely identify it. *Compare* digital watermark.

**fingerprnt reader** *n.* A scanner that reads human fingerprints for comparison to a database of stored fingerprint images.

**fingerprnt recognition** *n.* A technology used to control access to a computer, network, or other device or to a secure area through a user’s fingerprints. The patterns of an individual’s fingers are scanned by a fingerprint reader or similar device and matched with stored images of fingerprints before access is granted. *See also* biometric.

**FIPS** *n.* *See* Federal Information Processing Standards.

**FIPS 140-1** *n.* Acronym for **Federal Information Processing Standard 140-1**. A U.S. Government standard, issued by the National Institute of Standards and Technology (NIST), entitled Security Requirements for Cryptographic Modules. FIPS 140-1 defines four levels of security requirements related to cryptographic hardware and software modules within computer and telecommunications systems used for sensitive but unclassified data. The four security levels range from basic module design through increasingly stringent levels of physical security. The standard covers such security-related features as hardware and software security, cryptographic algorithms, and management of encryption keys. FIPS 140-1 products can be validated for federal use in both the United States and Canada after independent testing under the Cryptographic Module Validation (CMV) Program, developed and jointly adopted by NIST and the Canadian Communication Security Establishment. *See also* cryptography.

**firewall** *n.* A security system intended to protect an organization’s network against external threats, such as hackers, coming from another network, such as the Internet.



**serial port adapter** *n.* An interface card or device that either provides a serial port or converts a serial port to another use. *See also* adapter, serial port.

**serial printer** *n.* A printer connected to the computer via a serial interface (commonly RS-232-C or compatible). Connectors for this type of printer vary widely, which is one reason they are less popular than parallel printers among those who use IBM and IBM-compatible PCs. Serial printers are standard for Apple computers. *See also* DB connector, serial, serial transmission. *Compare* parallel printer.

**serial processing** *n.* *See* sequential processing (definition 2).

**Serial Storage Architecture** *n.* *See* SSA.

**serial transmission** *n.* The transfer of discrete signals one after another. In communications and data transfer, serial transmission involves sending information over a single line one bit at a time, as in modem-to-modem connections. *Compare* parallel transmission.

**series circuit** *n.* A circuit in which two or more components are linked in series. All the current passes through each component in a series circuit, but the voltage is divided among the components. *See the illustration. Compare* parallel circuit.



**Series circuit.**

**serif<sup>1</sup>** *adj.* Marked by the use of serifs. For example, Goudy is a serif typeface, whereas Helvetica is a sans serif typeface. *See the illustration. See also* serif<sup>2</sup>. *Compare* sans serif.



**Serif.** A serif typeface (top) and a sans serif typeface (bottom).

**serif<sup>2</sup>** *n.* Any of the short lines or ornaments at the ends of the strokes that form a typeface character.

**server** *n.* **1.** On a local area network (LAN), a computer running administrative software that controls access to the network and its resources, such as printers and disk drives, and provides resources to computers functioning as workstations on the network. **2.** On the Internet or other network, a computer or program that responds to commands from a client. For example, a file server may contain an archive of data or program files; when a client submits a request for a file, the server transfers a copy of the file to the client. *See also* application server (definitions 1 and 2), client/server architecture. *Compare* client (definition 3).

**server appliance** *n.* A device designed to deliver one or more specific network services in a single turnkey package that includes both hardware and software. All necessary programs are preinstalled on a server appliance, which has minimal, simplified options and controls. Server appliances can be used to complement or replace traditional servers on a network and can provide such services as file and printer sharing and Internet connectivity. *Also called:* appliance. *See also* information appliance.

**server-based application** *n.* A program that is shared over a network. The program is stored on the network server and can be used at more than one client machine at a time.

**server cluster** *n.* A group of independent computer systems, known as nodes, working together as a single system to ensure that mission-critical applications and resources remain available to clients. A server cluster is the type of cluster that Cluster service implements. *See also* cluster.

**server control** *n.* *See* ASP.NET server control.

**server error** *n.* A failure to complete a request for information through HTTP that results from an error at the server rather than an error by the client or the user. Server errors are indicated by HTTP status codes beginning with 5. *See also* HTTP, HTTP status codes.

**server farm** *n.* A centralized grouping of network servers maintained by an enterprise or, often, an Internet service provider (ISP). A server farm provides a network with load balancing, scalability, and fault tolerance. Individual servers may be connected in such a way that they appear to represent a single resource.

**serverlet** *n.* *See* servlet.

**Server Message Block** *n.* *See* SMB.